Houghton-le-Spring,
February 3rd 1896.

To the Urban Council of Houghton-le-Spring,

Mr Chairman and Gentlemen,

It is again my duty to lay before you my Annual Report for the year ending December 31. 95.
Accompanying my report are the tables "A" and "B" arranged by the Local Government Board; the former refers to the deaths classified according to diseases, ages and localities, and the latter to the New Cases of Sickness that have occurred during the year.
It will be seen from table "A" that 162 deaths have been registered during the year 13 of which took place in the Union Workhouse; but as that institution is for the use of the whole Union, only those deaths which occur to persons belonging to this division of the Union must be taken into account in estimating the mortality; and as only 6 of the 13 deaths are chargeable to this division of the Union, the number of deaths upon which the mortality must be based becomes reduced to 155.
If we estimate the population at the middle of the year as requested by the Local Government Board at 6.670 this is equivalent to a death-rate of 23.23 per 1.000 per annum and an infant mortality of 46.29 per cent. The number of deaths under one year per 1.000 registered births is 201.5.

The subjoined table gives the rates of mortality for the last four years as well as for the ~~last~~ four quarters of the present year :-

Year.	Death-rate per 1.000 per annum including Workhouse mortality.	Infant mortality.
1892	22 . 5	48 . 6
1893	25 . 08	51 . 5
1894	20	49 . 6
1895	24 . 29	46 . 29

1895.	Death-rate per 1.000 per annum including Workhouse mortality.	Infant mortality.
1st Quarter.	30 . 4	47
2nd "	18 . 9	28 . 1
3rd "	31 . 9	53 . 7
4th "	14 . 73	48

The births for the year number 263 —

124 Males

139 Females

which is equivalent to a birth-rate of 39 . 43 per 1.000 per annum and a natural increase to the population of 101.

The following table gives the number of births - male and female including the birth-rate and natural increase to the population for the last four years :-

Year. ~~1892~~	Total births.	No. of Males.	No. of Females.	Birth-rate	Natural increase.
1892	288	151	137	44.47	142
1893	257	130	127	39.06	83
1894	298	149	149	45	163
1895	263	124	139	39.43	101

In table "A" as I have said the mortality is classified according to diseases ages and localities. Reviewing the deaths in relation to their causes and following the order in which they appear in the table, we find that

2 are due to Diphtheria.
1 is " " Croup.
3 are " " Typhoid fever.
2 " " " Cholera (English)
6 " " " Whooping Cough.
7 " " " Diarrhœa.
7 " " " Phthisis.
27 " " " Bronchitis &c.
14 " " " Heart disease.
6 " " " Injuries.
87 " " " All other diseases, viz:-
162

Scrofulous diseases	9
Cancer	8
Dis. of the Nervous System	6
Convulsions	14
Atrophy	2
Dis. of the Digestive organs	5
" " " Urinary "	4
Premature birth	14
Old age	14
All other diseases	11

The subjoined table gives the death-rate per 1.000 from the principal Zymotic diseases for the last three years: –

	Diseases.	1893.	1894.	1895.
1.	Small pox.	"	"	"
2.	Scarlet fever.	1.08	.3	"
3.	Diphtheria & Membaneous croup.	"	.6	.44
4.	Typhus, Typhoid & Continued fever.	1.23	.6	.44
5.	Measles.	.62	.6	"
6.	Whooping Cough.	.77	.7	.89
7.	Diarrhoea and Dysentery.	2.16	-	1.3
8.	Phthisis	1.23	.4	1.04
9	Acute diseases of the lungs.	5.40	3.7	4.04

New Cases of Sickness.

The Infectious Disease Notification Act has been in force in this division of the Union since February 1st 1890.

On receiving the Notification forms it is my invariable practice to visit and inspect the premises occupied by the patient with as little delay as possible and to give such instructions as to isolation and disinfection as the exigences of the case may require.

In a large majority of the cases isolation is practically impossible as every one knows who has any personal knowledge of the district. Our population consists chiefly of the working class and as our birth-rate shows we are a child-bearing

population so that the accommodation in most cases is quite inadequate for the purpose of isolation. Your inspector makes an independent inspection on his own account and acquaints me with whatever sanitary defects he is able to find on his rounds of inspection.

Disinfectants are supplied free of charge and your inspector often personally superintends their use. We have a portable disinfecting apparatus which we use in all infectious cases unless we receive from the medical attendant satisfactory evidence that the contaminated articles have been properly disinfected.

Under the Infectious Disease Notification Act 94 cases have been notified during the year as against 105 for the previous year, viz:-

	39	Scarlet fever.
	2	Diphtheria.
	2	Croup.
	45	Typhoid fever.
	6	Erysipelas.
Total	94	

They are arranged according to localities and ages as shown by the subjoined table:-

Localities.	Fractures		Dislocations		Emphysema		Cancer		Lipomata		Total.
	Under 5	Over 5	Under 5	Over 5	Under 5	Over 5	Under 5	Over 5	Under 5	Over 5	
Ile Maurice.						2					2
Chaudière Co.	2	4		5							11
Montreal Town.	6	6		3							14
Prospect Row.				1							1
Pennsylvania		2		5					1		8
Richmond Co.		2		4							6
Rouville Co.				6							6
Pain Court		2		1							3
Sherbrooke Co.		2					1				3
Stanstead Co.		3									3
Stoke Co.		2		6		1	1				6
Shefford Co.		1		5					1		7
Missisquoi Co.						1					1
Richelieu		3		1		2					6
Vaudreuil Co.				5							5
Terrebonne				1							1
Yamaska Co.				2							2
Vaudreuil		2									2
Wright Co.		2									2
Totals.	8	31		45		6	2		2		
	39		45		6		2		2		94

1904-5	[illegible]		[illegible]		[illegible]		[illegible]		[illegible]		Total
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
January	[illegible]	[illegible]		[illegible]							[illegible]
February		[illegible]		[illegible]							[illegible]
March		[illegible]									[illegible]
April	[illegible]	[illegible]		[illegible]			[illegible]		[illegible]		[illegible]
May		[illegible]		[illegible]							[illegible]
June				3							[illegible]
July				1		2	1				—
August				5							[illegible]
September		5		7							12
October	[illegible]	—		[illegible]							8
November	[illegible]	[illegible]		—							—
December	[illegible]	[illegible]		—		[illegible]					[illegible]
Totals	8	21	—	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
	29		[illegible]		6		5		2		[illegible]

Small Pox. Not a single case of this terrible and loathsome disease has been reported during the year.

Scarlet Fever. The cases of Scarlet fever appeared chiefly in a sporadic form, cropping out every now and again in different parts of the town but never assuming anything like the form of an epidemic. In the majority of cases the disease was so mild in character that a diagnosis was often a matter of some difficulty, and in not a few instances the subsequent desquamation of the [illegible] [illegible] the [illegible] of the disease [illegible] [illegible] [illegible] [illegible] [illegible] [illegible] [illegible].

Diphtheria. It is matter of congratulation that we have been so free from this serious, considering its prevalence in recent years in this and other parts of the Union. The two cases of the disease occurred to children aged respectively 4½ years and 15 months and unfortunately terminated fatally. The houses were scrupulously clean and orderly and the only evidence of infection was that the mother of one of the children had recently attended the funeral of a child that had died of Croup.

Croup. Owing to an omission on the part of the medical attendant the case of Croup was not notified at the time. I could discover no history of infection in this case.

Typhoid fever. As I have repeatedly remarked gentlemen, the amount of sickness from Typhoid fever enables us to form a rough and ready estimate of the sanitary condition of a town. It is a seasonal disease and the climax is usually reached by the end of October when it begins to decline. By referring to the table which I have prepared for the purpose it will be seen that its rise and fall during the year was precisely what we might have expected from our knowledge of the disease.

Three of the cases which took place in January were probably due to sanitary defects while the fourth was a secondary case occurring in a family where three children were recovering from the disease but whose recovery was not sufficiently advanced to permit of the disinfection of the house articles of clothing &c.

In connection with one of the February cases I found the house drains out of order. Some upon

we had a secondary case; and with regard to the 2 remaining cases no apparent sanitary defects could be found. It is a little singular that the 2 cases which took place in April and May both occurred at Colliery Row and were the only cases reported from that district during the year. This is important as will be seen presently as showing that the drinking water was in no way responsible for the outbreak of the disease which occurred later on; although on neither case was it possible to discover any apparent sanitary defect, No. 1 case occurred in one of the rows in September of the previous year.

The June cases were all associated with sanitary defects. In one a ventilating shaft terminated close to the bedroom window of the patient. In another the yard was sloppy and badly kept and the house itself was dirty. The drain of the house in which the two cases occurred was choked up and during the necessary repairs a very offensive smell was complained of by the inmates.

The only case in July was that of the wife of the patient referred to where the ventilating shaft opened close to the bedroom window.

August:- Three of the five cases that occurred during this month were reported from Thilton Moor — the only cases we have had in that part of the township during the year. They all occurred in the same house and were members of the same family. It was an old house and was damp and the street ventilator, which is within a few yards of the window, was very offensive. The inmates informed me that at times they had to close their doors and windows in order to keep out the stench. Another case occurred in the

Concerned house with the objectionable ventilating shaft referred to in connection with the July and one of the June cases. With regard to the 5th case which occurred in Upper St. no trace of infection could be found.

September:- In only one of the 7 cases that occurred in this month was there any apparent sanitary defect. The house, situate in Orion St. was without proper privy accommodation and everything had to be carried through the house. This state of things is both objectionable and improper and in all such cases dry earth should be provided where possible.

October:- Although I made a careful inspection of the houses and out-offices in connection with the above cases which occurred during this month in no instance was I able to discover any apparent sanitary defect. A street ventilator not far from one of the houses was supposed by the family to be the source of infection as for some time back it had been very offensive. In none of the other cases was there any obvious trace of infection.

November:- The cases which occurred in this month were in all probability due to infection as frequent visiting at infected houses was much indulged in by the patients.

December: In only one of the four cases which took place in this month was I able to discover any sanitary defects. The house was damp and putrefaction was taking place from an adjoining privy. In another of the cases the sufferer was a sister of a patient on whom she was engaged as nurse.

I must again point out, gentlemen, that Typhoid Fever may be found in this town than a private home. It is worthy of remark that in connection with almost all the cases that started from January to the time of their decease, details of a third or two more cases were found. The largest cases, as I have said, were in all probability due to the defective ventilating shaft and the street ventilator at Clifton Tower, while in all the subsequent cases nothing objectionable could be discovered. The marked increase of the disease from September to the end of the year is difficult to explain. Although the weather was singularly favourable for the production of those conditions which tend to the propagation and spread of the disease, taking into making full allowance for this, considering it must be conceded that the disease from this disease is much more numerous.

With a new system of sewerage, which, so far as Templeton Lodge is concerned, has proved favourable for the rapid transit of the sewage, there is no reason why we should suffer more from the contagion. May I point out that the population. As you are aware, gentlemen, Typhoid fever has been so prevalent in this town for some years back that the Registrar General commented on the fact in his Annual Report for 1882.

I shall now carefully note the question and although as I have said a few cases of fever were found in connection with some of the houses inspected by the Inspector, I have been able to discover nothing to account for the outbreak during the latter part of the year.

Wards - the lower wards, distributed, lastly, uniformly over all parts of the town, other parts of the township engaged in field work immediately from the disease.

Colliery Row, gentlemen, is a detached village situated about one mile from Broughton and has a population of probably 1,000 persons. It is supplied with Mr Houghton water but has a separate system of sewerage in conjunction with Chilton Moor. The New Town, Market Place, Church St. Peckham Place and Mount Pleasant, the three wards of the town lying east of the Church with a population of probably 2,000 persons have a system of drainage common to the rest of the town and are supplied with the same drinking water. It is a fact singular that not a single case of the disease occurred in this district from Saturday to the 25th October and on 11th November respectively when two cases were reported, one of the patients was a lodger working in one of the Easington pits and the other a child aged 3½ years. The extraordinary fact from respond question that the drinking water was in no way responsible for the outbreak, and as the affected families were obtaining their milk supply from the various dairies in the district - many of whom had customers in the non-affected part we may safely assume that the milk also was in no way to blame for the outbreak.

Of the 45 cases that have been reported during the year 32 were males and 13 were females. By a perusal of the age table it will be seen that of the males none were under the age of 5 years while the rest were from 15 to 75 and upwards inclusive with the exception of 13 who were employed in the pit.

	Months 1 to 6	Months 6 to 12	Months 12 to 18	Months 18 to 24	Months 24 to 36	Months 36 to 48	Months 48 to 60	Total.
Males.	1	1	9	13	7	1	2	34
Females.	1	1	5	3	4	2	1	17

As you are aware, gentlemen, we are considering the advisability of providing more ventilation for what should be by means of ventilating shafts carried down the corner of the houses. In warm weather and on thoroughly diurnal and pleasant occasions many of which we have had in the most densely populated close to the houses, might prove a source of danger and harm of themselves, if not as they unquestionably may. We to speak with any degree of certainty that the imperfect ventilation of our sewers has had a not inconsiderable share in the recent outbreak of the disease. The notable features of the outbreak are the almost entire absence of anything like diarrhoea in the patients, the prostration headache and the acute crippling pains in the extremities which continue to be troubling individuals and diminish more or less until the crisis of the disease.

<u>Cholera</u>. Although two cases were reported as being due to English Cholera, not a case of Asiatic Cholera has been notified. (Mr. Thomson.)

<u>Erysipelas</u>. Only five cases of Erysipelas have been reported, two of which were notified twice after an interval of some months. Two of the cases were said to accident and in two cases the premises occupied by the patients family are out of order.

Measles. Only two or three cases of measles have come under my observation during the year.

Whooping Cough. During the first quarter of the year we had an epidemic of Whooping Cough. The disease itself was mild in character when unaccompanied by Bronchitis and Pneumonia and the patients were seldom seen except with such complications. In the last quarter a few scattered cases occurred one of which terminated fatally.

Chicken Pox. We have been singularly free from chicken pox; not a single case of the disease has been reported to me or come within my knowledge.

Diarrhoea. During the months of August and September a very severe epidemic of diarrhoea prevailed all over the district. The young were most liable affected and the deaths from the disease have seriously augmented the death rate. The bowel discharges were characterised by vomiting even in the days and body generally and great prostration. So exceptionally trying was the weather during this portion of the quarter, owing to the intense heat, that butcher meat, fish, milk and the like were rendered almost unfit for use in the course of a few hours. Infants and young children, brought up on the bottle, naturally suffered most in their case the Diarrhoea and sickness resulting from the altered condition of the milk - which I do not hesitate say is the natural food of the young - were difficult to combat. The stools and vomits too were very offensive as were also the sputts and fluids owing to the active, retrogressive change that was taking place in these systems.

Influenza. During the months of January and February, and again in November and December we had a few scattered cases of influenza but in no instance did the disease exhibit any of the severe symptoms which characterised the previous epidemics. A fever with or without a slight frontal headache and nasal catarrh which usually lasted for a few days and then subsided were among the chief symptoms.

Milk. The milk offered for sale has been of fair average quality and I am not aware of any disease having been attributed to its use. Samples are forwarded from time to time to the County analyst by the Inspector under the County Council, but so far as I am aware no convictions have been obtained.

Meat. The meat offered for sale has been up to the standard of previous years. The carcass of a pig was seized by your inspector at my request as being unfit for human food. It was examined by Mr. Veterinary surgeon, Durham, who forwarded the viscera &c. to the Board of Agriculture who ultimately reported that the animal had died from tuberculosis. By an order of the magistrates the pig was cut up and buried.

Food & Drugs Act. Proceedings under this Act are taken by the County Council and I am not aware of any convictions having been obtained.

The Public Health Act Amendment Act and the Infectious Disease Prevention Act are both adopted by your authority.

Dairies & Cowsheds. These have been regularly inspected by your inspector and myself and with one exception they have been kept clean and orderly and well ventilated. In this case the byre and yard were in a foul condition and the cesspit and privy were overflowing.
Slaughter houses. These have also been inspected from time to time and although the animals are slaughtered in the shops, the offal and other refuse are at once removed out of the town so that everything is kept clean and in a satisfactory condition.
Lodging houses. These are periodically inspected and the occupiers are instructed to give immediate information to your Medical Officer of any sickness occurring among their lodgers, so as to guard against the spread of Infectious Disease. One of the houses was closed by order of your authority so that the number is reduced to two.
Water. The consumption of water for the year has been 32.120.000 gallons for all purposes or 13 gallons per head per day of the population. In the month of March a sample of water was sent to Mr Stock, County Analyst for analysis and as his report was somewhat unfavourable it was decided to send a second sample this time taken from the rising main and not from the reservoir. Meanwhile the reservoir was cleaned out by your inspector as it was thought possible that the pollution referred to by the analyst might be due to a foul condition of the reservoir itself. But the second analysis still shows the water to be polluted. It was then decided to send a sample each to Dr Dupré of London and Mr Patterson, Newcastle, both of whom pronounced the water to be

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sanction of the Local Government Board before completing the purchase. The Local Government Board however, have refused to give their sanction on account of the too close proximity of the site to the boundary fence. Negotiations are now going on with the representative of the Earl of Durham for a site on the other side of the road and it is to be hoped that the negotiations will be successful as an isolation hospital for this division of the Union is much needed.

Scavenging. The scavenging has been very well carried out and with the usual supervision exercised by your inspector, there is no reason why our present system should not work well. In every case where practicable the contents of the privy ashpits should be scooped direct into the carts so as to avoid all surface pollution. This is a point of more importance than is generally believed.

Back streets & footpaths. Mauritania St., Bowery St., Mary St., Hopper St., Union St., and George St. have all been done up and your inspector is instructed to proceed as early as possible with Back o' the and New Sunderland St. A very substantial improvement has thus been effected as in wet weather these streets were very sloppy and at times almost impassable. The footpaths and channels have also been done up. Notice was served upon the owner of a yard in Sunderland St. to abate a nuisance arising from the keeping of horses, pigs &c. The yard is to be done up and drained and proper receptacles provided for the manure and other refuse.

Many of the down-comers are still allowed to discharge on to the footpaths direct in place of into cast iron channels. This is a common source of dampness as when the footpaths are damaged the water percolates through the ground to the walls of the

houses. The whole district has been inspected from time to time during the year by Committees of your Board. As the result of the last inspection which took place in November the following sanitary defects have been dealt with, viz:-

30 cesspits out of repair.

30 privies repaired.

40 yards repaired and done up.

20 houses to be done up & provided with proper sporting

40 old privies replaced by improved receptacles.

<u>New Houses.</u> Twenty new houses have been built during the year.

<u>Sewers.</u> The Colliery Row and Chilton Moor sewer has been abolished and the sewage from the parts of the district now flows by gravitation direct into the tanks, thus doing away with the frequent flushing rendered necessary by the deposit in the sewer which took place from time to time under the old system. Four automatic flushing tanks are in operation at Colliery Row and Chilton Moor. These are timed to discharge at stated intervals and have a good effect in keeping the sewers sweet. The Houghton tanks are also regularly and automatically flushed. In the Market Place the water from the town is diverted into the main sewer while the sewers in the other parts of the town are flushed from the water mains by means of a hose. In dry drought seasons when flushing of the drains is of the importance the supply of water for such purposes is sometimes very limited.

<u>Ventilation of sewers.</u> The ventilation of our sewers is not all that could be desired as I have already said the ventilators frequently open on the back streets and so frequent complaints have been made by the inhabitants of the [illegible] coming from these

openings the most offensive were closed ~~[illegible]~~ by means of a metal cover, thus stopping the spitting of gas at the point complained of but making the opening lower down the more objectionable. I should advise ventilating shafts to be placed in all our back streets. Croydon is ventilated in this way and by a perusal of the Registrar General's returns it will be seen that it has almost the lowest death rate of any town in the kingdom.

Other improvements have been carried out.

Prospect Row. The drains in this row have been enlarged and new footpaths and channels have been provided and additional sinks added to some of the houses.

Lorrington St. This street has been substantially dealt with by new footpaths and channels provided and additional sinks added to some of the houses.

Back London St. & Square. A very substantial improvement has been effected here by taking down all the old privy ashpits and replacing them by improved receptacles and by removing the piggeries and other objectionable outbuildings and rebuilding the boundary wall. It will be remembered that twice during the year swine fever broke out among the pigs kept in this square. By an order of the Board of Agriculture some twenty of the animals were slaughtered.

Quarry Row East. A new brick footpath and channel have been provided for this street and two new drains have been laid and the old piggeries have been done away with.

Dropper Square. The ashpits and outhouses in this square have been repaired and the sinks and drains have been put into good order.

Putteran – Market Place. The old outoffices have been

Extra duty and exposure by reason of hostilities and necessary removals have been avoided.

Ventilation. Now under the direct of three tents is given both alone and in conjunction with your inspector who is always most willing and ready to carry out any recommendations I may make.

Death rate. The death rate is comparatively high since first which during hostilities was more due to the mortality arising in part under my care, the low epidemic was so very high. By referring to the monthly mortality table it will be seen that the mortality during the second and fourth quarter was low. It will also be noticed that it was in the first and third quarter when the heavy death rate took place. The previous occupation of the first quarter and the epidemic of Whooping Cough are responsible for the high mortality during this portion of the year while the internal heat and the epidemic of Diarrhoea may be looked upon as mainly responsible for the high death rate in the third quarter — thus the deaths from whooping cough were 14 from Bronchitis 8 from Diarrhoea, 5 from Convulsions and 1 from Gastro enteritis, or in all 41 occurred in the first and third quarter, whom one do not [illegible] in these tables [illegible].

I have the honour Sir,
Mr Chairman and Gentlemen,
Your obedient Servant
[signature]
Medical Officer.

County Analyst's Office.
Darlington.
February 27th 1895.

Dr Pure,

I hereby certify that I have analysed a sample of water marked "Water for analysis" which I received from you on the 21st Feby. 1895 and that I find as follows: —

Colour and appearance in 2 foot tube.	Faint brownish, not quite clear, not marked.
	Grains per Gallon.
Chlorine as Chloride	2.4050
Nitrogen as Nitrates	.0086
Ammonia	.0035
Albuminoid Ammonia	None
Oxygen absorption	.0182
Injurious metals	None
Total solid matter dried at 220° Fahr.	55.3000
Microscopically	Moving organisms, Decomposing vegetable tissue, Fungoid growths. Starch granules, Woollen and linen fibres, Mineral matter.

Observations.

There is a distinct evidence in the above analysis of contamination with impure surface water. I have met with many similar samples where the pollution was traceable to land drainage. It is impossible in the light of modern sanitary science to look upon such water as fit for drinking purposes. Nothing but efficient filtration could make it so.

W. F. Keating Stock.

County Analyst's Office.
Darlington.
March 28th 1895.

Dr Park,

I hereby certify that I have analysed a sample of water marked "Water for analysis" which I received from you on the 19th March 1895 and that I find as follows :-

Colour and appearance in 2 foot tube	Almost colourless, not clear.
Odour when heated to 100° F.	Faintly resinous.

	Grains per Gallon.
Chlorine as Chlorides	3 . 0800
Nitrogen as Nitrates	. 0108
Ammonia	. 0106
Albuminoid Ammonia	. 0028
Oxygen absorption	. 0308
Injurious metals	None.
Total solid matter dried at 220° Fahr.	58 . 8000

Microscopically { Much decomposing vegetable tissue, Starch granules, Moving organisms including Bacteria, Mineral matter, Not satisfactory.

Observations.

I am of opinion that the above sample is not a sample of satisfactory quality for drinking purposes. The general results of the chemical analysis coupled with those of the Microscopical examination go to indicate the presence of impure surface water. In the absence of any detailed history of the sample and its source I can only indicate broadly that the presence of .0106 grs. per gallon of Ammonia and the bodies disclosed by the microscope is not consistent with purity.

W. F. Keating Stock.

Laboratory and Assay Office,
Newcastle
April 11th 1913

We hereby certify that we have analysed the undermentioned sample of water and find the following results per gallon:

Sample received April 11th 1913 from [illegible]

Total solid matter dried at 212° Fahr.	59.200 grains.
Chlorine as Chlorides	2.918
Ammonia	0.001
Albuminoid Ammonia	0.005
Nitrogen as Nitrates	[illegible]
Oxygen absorbed in 4 hours	0.013
Total hardness after boiling	[illegible]
Appearance on 24 hrs. rest	Colourless & transparent.
Result when heated to 100° F.	None.
Microscopically	Mineral & vegetable debris, diatoms and infusoria.

This analysis shows that the sample is very free from organic impurity. The microscopical examination also indicates that it is very free from vegetable organisms. The use of spring water in these districts is a very suitable one for drinking purposes. The quantity of total solid matter in solution is far within limits that other of which should contain. It is consequently a very "soft water".

[illegible] F. Pattinson.

Analytical details.

Appearance	Clear.
Colour	Very pale - greenish yellow.
Smell	Inodorous.
Deposit	Trace.
Nitrous Acid	None.
Nitric Acid	Trace (minute)
Poisonous metals	None.
Hardness before boiling	26 degrees (Clark)
after "	30 " "

Grains per gallon.

Oxygen absorbed	0.026
Total Dry residue	[illegible]
Chlorine	[illegible]
Nitric Nitrogen	0.05
Ammonia	0.0073
Albuminoid Ammonia	0.0046
Colonies per cubic centimetre	Thousands
Colour of residue	Pale brownish
Behaviour of residue on ignition	Darkens - scarcely perceptibly.

April 18th 1895.

The water is clear but on standing gives a trace of deposit, which, though consisting mainly of mineral matters contains numerous specks of a yellowish green tissue, especially fibre and numerous large animalcula. The number of colonies obtained by cultivation in gelatine were too numerous to count in the ½ cubic centimetre taken. In other respects the water is of a very good quality as far as absence of pollution by organic matter is concerned

concerned. It is however, necessarily hard and remains extremely hard even after boiling.
This great hardness by itself is sufficient to render the water extremely unsuitable for a domestic supply even if all the other features were entirely satisfactory.
The date on which the sample was drawn is not given and it is possible that the very large colonic pollution is due to the fact that the water had been kept for several days before it was tested.

A. Dupré.

Medical Officer,
Euston St.,
Westminster.

Officer conducting my report of Accident is list of persons who have died in the Lunacy County Lunatic Asylum, who formerly belonged to the Lunacy of the Lunacy.

As the death rate is based on the population estimated at the middle of the year. Those deaths do not affect the death rate.

Name of Patient.	Date of Admission.	Date of Death.
[illegible]	Sept 2nd 1871	Nov. 20th 1872.
[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	Dec. 20th 1874.
[illegible]	June 1st 1874.	Aug. 31st 1878

[illegible]

2 11.

B)

TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, *coming to the knowledge of the Medical Officer of Health, during the year* 1895, *in the* Houghton-le-Spring Union Urban *District; classified according to* DISEASES, AGES *and* LOCALITIES.

Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (See Note 2 on back of sheet.) (a.)	Population at all Ages. Census 1891. (b.)	Population at all Ages. Estimated to middle of 1895. (c.)	Registered Births. (d.)	Aged under 5 or over 5. (e.)	New Cases of Sickness in each Locality, coming to the knowledge of the Medical Officer of Health. 1 Smallpox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Croup.	5 Fevers. Typhus.	6 Fevers. Enteric or Typhoid.	7 Fevers. Continued.	8 Fevers. Relapsing.	9 Fevers. Puerperal.	10 Cholera.	11 Erysipelas.	12	13
Houghton-le-Spring	6.476	6.670		Under 5		8	2	2									
				5 upwds.		31				45					4		
Workhouse				Under 5													
				5 upwds.											2		
				Under 5													
				5 upwds.													
				Under 5													
				5 upwds.													
				Under 5													
				5 upwds.													
				Under 5													
				5 upwds.													
				Under 5													
				5 upwds.													
				Under 5													
				5 upwds.													
				Under 5													
				5 upwds.													
	Males		124	Under 5													
	Females		139	5 upwds.													
Totals	6.476	6.670	263	Under 5		8	2	2									
				5 upwds.		31				45					6		

Number of such Cases Removed from their Homes in the several Localities for Treatment in Isolation Hospital.	1 Smallpox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Croup.	5 Fevers. Typhus.	6 Fevers. Enteric or Typhoid	7 Fevers. Continued	8 Fevers. Relapsing	9 Fevers. Puerperal	10 Cholera.	11 Erysipelas.	12	13

State here whether "Notification of Infectious Disease" is compulsory in the District Yes. Since when? Febry. 1st 1890 Besides the above-mentioned Diseases, insert in the columns with blank headings the names of any that are notifiable in the District, and fill the columns accordingly. State here the name of the Isolation Hospital used by the sick of the District. Mark (H) the Locality in which such Hospital is situated; and if not within the District, state where it is situated

NOTES ON TABLE B.

(See also Notes on back of Table A.)

NOTE 1. The present *Table B.* is concerned with population, births, and sickness (not with mortality) in the district or division to which the Table relates.

2. As stated in the heading of Col. *(a)*, *Public Institutions* should be regarded as separate localities, and the new cases of sickness in them should be separately recorded. Workhouses, Hospitals, Infirmaries, Asylums, and other establishments into which numbers of people, and especially of sick people, are received, are Public Institutions for the purpose of these statistics.

3. *Comments on any unequal incidence of notifiable disease upon the several localities, and considerations as to the local incidence of consumption and other prevalent diseases, should be made in the text of the Report.*

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K. 3.

(A) TABLE OF DEATHS during the Year 1895, in the Houghton-le-Spring Union Urban District, classified according to DISEASES, AGES, and LOCALITIES.

Names of Localities adopted for the purpose of these Statistics; public institutions being shown as separate localities. (See note 4 on back of sheet.) (Columns for Population and Births are in Table B.) (a)	Mortality from all causes, at subjoined Ages. At all ages. (b)	Under 1 year. (c)	1 and under 5. (d)	5 and under 15. (e)	15 and under 25. (f)	25 and under 65. (g)	65 and upwards. (h)	(i)	1 Smallpox.	2 Scarlatina.	3 Diphtheria.	4 Membranous Croup.	5 Fevers: Typhus.	6 Fevers: Enteric or Typhoid.	7 Fevers: Continued	8 Fevers: Relapsing	9 Fevers: Puerperal.	10 Cholera.	11 Erysipelas.	12 Measles.	13 Whooping Cough.	14 Diarrhœa and Dysentery	15 Rheumatic Fever.	16 Phthisis.	17 Bronchitis, Pneumonia, and Pleurisy.	18 Heart Disease.	19 *	20 Injuries.	21 All Other Diseases.	22 Total.
								Under 5			2	1						1			6	7			15			1	41	74
oughton-le-Spring	149	52	22	7	8	30	30	5 upwds.						3				1						6	12	12		4	37	75
								Under 5																					1	1
e Workhouse	13	1				6	6	5 upwds.																1		2		1	8	12
								Under 5																						
								5 upwds.																						
								Under 5																						
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Totals	162	53	22	7	8	36	36	Under 5			2	1						1			6	7			15			1	42	75
								5 upwds.						3				1						7	12	14		5	45	87

The subjoined numbers have also to be taken into account in judging of the above records of mortality. *See Note 5 on back.*

Deaths occurring outside the district among persons belonging thereto.								Under 5																						
	4					4		5 upwds.						1										1	1	1				4
Deaths occurring within the district among persons not belonging thereto.								Under 5																					1	1
	7	1				4	2	5 upwds.																1	1			1	3	6

* The heading of column 19 is left blank for the insertion of Influenza, or any other disease which it may be thought desirable to record.

NOTES ON TABLES A AND B.

NOTE 1. *Medical Officers of Health of "Combined Districts" must make a separate Return for the District of each District Council.*

2. *Medical Officers of Health acting for a portion only of the District of a District Council should write, in the heading of the Table, the designation of the Division for which they act.*

3. *The words "Urban," "Rural," or "Metropolitan" must be inserted in the appropriate space in the heading, according as the District is Urban or Rural, or is within the Metropolitan Area.*

4. The "*Localities*" adopted for the purpose of these statistics should be areas of known population; such as parishes, groups of parishes, townships or wards.

As stated at the head of the first column in each Table, *Public Institutions* should be regarded as separate localities, and the deaths in them should be separately recorded. Workhouses, Hospitals, Infirmaries, Asylums, and other establishments into which numbers of people, and especially of sick people, are received are Public Institutions for the purpose of these statistics.

5. *The deaths which have to be classified in this Table* (A), and summed up in the horizontal line of "Totals," are the whole of those *registered* as having actually occurred in the several localities comprised within the Division or District. But the registered number of deaths frequently requires correction before it can give an exact view of the mortality of a Division or District; and the two lowest horizontal lines are provided for the purpose of enabling Medical Officers of Health to indicate, to the best of their ability, what the extent of such corrections should be. Details concerning the corrective figures, *e.g.*, the institutions that have been considered, or the particular localities to which corrections apply, may appear in the text of the report or in supplementary tables.

Area and Population of the District or Division to which this Return relates.

Area in Acres 1.551

Population (1891) 6.476

Death Rates.	General 23.23	per 1,000 Population, estimated to middle of 1895.
	Infant (under one year of age) 201.5	per 1,000 Births Registered.

In recording the facts under the various headings of Tables A and B, attention has been given to the notes endorsed on the Tables.

F. J. Park *Medical Officer of Health.*

(Date) February 3rd, 1896.

W B & L (555u)—56221—10,200-10-95